



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 7

11201 Renner Boulevard  
Lenexa, Kansas 66219

SEP 18 2014

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Article No.: 7002 0860 0006 5965 9650

Ms. Cheri T. Holley  
DICO  
2345 East Market Street  
Des Moines, Iowa 50317

Re: NOTICE OF DISAPPROVAL  
Administrative Order, Docket No. 86-F0011  
DICO's Performance Evaluation Report No. 28, Groundwater Extraction and Treatment System,  
Des Moines TCE Site, Des Moines, Iowa

Dear Ms. Holley:

The U.S. Environmental Protection Agency received DICO's Performance Evaluation Report No. 28 (Report) on May 22, 2014. The EPA has reviewed the Report and disapproves of the document in accordance with paragraph 36 of the above-referenced Administrative Order. Attached to this letter are the EPA's comments to the Report and the reasons the EPA cannot approve this document. Please note that while the EPA's attached comments reference specific sections of the Report, the comments are applicable to the entire Report. In accordance with paragraph 36 of the above-referenced Administrative Order, DICO must submit a revised report within thirty days of receipt of this notice that addresses each of the comments to the satisfaction of the EPA.

If you have any questions concerning this matter or wish to discuss the actions necessary to revise the Performance Evaluation Report to obtain the EPA's approval, please contact me at (913) 551-7454.

Sincerely,

Sandeep Mehta  
Remedial Project Manager  
Iowa/Nebraska Remedial Branch  
Superfund Division

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Superfund

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Enclosure

cc: Brian Mills, Consultant, DICO (via e-mail only)  
Gazi George, Consultant, (via e-mail only)  
Hylton Jackson, IDNR (via e-mail only)  
Vern Rash, DMWW (via e-mail only)

EPA Review Comments  
Performance Evaluation Report 28  
DICO, Des Moines, Iowa  
June 2014

Comment No.	Page/ Section/ Paragraph	Comment
1	Cover letter and cover of the document	The cover transmittal letter indicates the document to be DICO Performance Evaluation Report (PER) #18. The cover of the document indicates Performance Evaluation Report #28. The EPA believes this report to be PER #28. Please confirm and verify that the document itself also identifies the report as #28.
2	Page 1, Section 1, Paragraph 1	DICO must modify the last sentence of the paragraph 1 to read as follows: "... in addition to ... success in limiting the off-site migration of the contaminants to the Des Moines Water Works north infiltration gallery."
3	Page 1, Section 1, Paragraph 4	<p>The text indicates that this report, in part, is intended to support DICO claims that the system has been very effective in the past and reached a stage where it can be eliminated. Page 3, Section 2.3 of this PER indicates continued recovery and plume containment is necessary to extract source mass. TCE concentrations, while erratic, do not indicate declining influent concentrations. Influent TCE concentrations in 2013 ranged from 280 µg/L to 580 µg/L, averaging 455 µg/L. There appears to be a persistent source of impacts to groundwater at OU1. Asymptotic mass concentrations demonstrate the limitation of the treatment system in reducing COCs to meet restoration goals at the site. As indicated in the Fifth Five-Year Review Report, deteriorating conditions were noted in various areas of the asphalt cap; with continued deterioration, more infiltration shall occur and the potential for soil source material to impact groundwater will increase. Thus, DICO's groundwater monitoring results demonstrate the hydraulic containment provided by the continued operation of the extraction system is necessary to restrict plume migration to other areas, as required by the Administrative Order.</p> <p>Therefore, the EPA strongly disagrees with DICO's assertion that "...the system... has reached a stage where it can be eliminated". The EPA has communicated its position to DICO repeatedly through comments provided on past Performance Evaluation Reports. DICO must correct the report paragraph 4, to read as follows: "This report is intended to document and reflect the operation and performance of the groundwater extraction system over the past year of operation with supporting figures and tables."</p>
4	Page 2, Section 2.2, Paragraph 1	DICO must modify the second sentence of the paragraph 1 to read as follows: "The purpose of these recovery wells is to extract contaminated groundwater to eliminate migration of chlorinated residues towards the Des Moines Water Works north infiltration gallery."
5	Page 2, Section 2.2, Paragraph 3, Figure 3	This figure depicts a November 2013 water elevation in recovery well ERW-6 at about 788 ft. or 5 ft. above the Raccoon River at an elevation of about 783 ft. According to Table 1, the elevation of water at ERW-6 during November is 10 ft. higher than most other months in 2013. Is the ERW-6 water elevation a typographical error? If not, please explain how this could occur? DICO is required to review and revise the report, and re-submit the report for approval.

EPA Review Comments  
Performance Evaluation Report 28  
DICO, Des Moines, Iowa  
June 2014

Comment No.	Page/ Section/ Paragraph	Comment
6	Page 3, Section 2.3, Paragraph 1, Figure 5/Sentence 6	<p>The text indicates that this figure shows a relatively constant or narrow range in recovered TCE concentrations exists. Figure 5 depicts influent concentrations that range from &lt;100 µg/L to &gt;1000 µg/L over the most recent 10 year period. The text must indicate that sentence refers only to 2013 rather than the most recent 10 year period represented by Figure 5. In addition, DICO is required to add, in the report, the range for COCs, i.e. TCE, 1,2-DCE, and vinyl chloride and compare with their MCLs.</p> <p>DICO must delete the next to last sentence of the 1<sup>st</sup> paragraph under section 2.3 as it is a subjective statement and the EPA disagrees with the conclusion due to the reasons provided above. Please revise the last sentence in this paragraph to read “The contaminant concentrations are generally consistent with that observed in 2012 and indicates continued recovery and plume containment is necessary to extract source mass.” Please correct and re-submit the report for the EPA’s approval.</p>
7	Page 4, Section 3.0, Sentence 2/4/5/6	<p>The text indicates a groundwater capture width of 100 feet or less is an example of the effectiveness of the pump and treat system. Please explain the reasoning for this statement. Review and revise as appropriate. The text indicates that in this zone, water from the Raccoon River is lost to the groundwater system. If “in this zone” refers solely to inside the meander, please revise the sentence to be inclusive of zones on either side of the river.</p> <p>The text indicates the reason for water being lost from the river to the groundwater system is likely a remnant effect of the infiltration gallery. The text must indicate that use of the spillway flash boards allows the river elevation to rise above its banks which increases the downward hydraulic pressure into the groundwater system rather than being due to the infiltration gallery. The following sentence infers the consistent groundwater low in the area of piezometer P-2 is due to the remnant effects of the infiltration gallery. Please explain and revise the report.</p> <p>DICO is requested to modify the first sentence to read as follows: “Based on data on the east side of Raccoon River, the pump and treat system is effectively reducing, and/or eliminating, the off-site migration of contaminants to the DMWW’s north infiltration gallery.” Please re-submit the report for the EPA’s approval.</p>
8	Page 5, Section 5.0, Sentence 3	<p>The text indicates the north gallery is between well NW-9 and piezometer P-4. Numerous figures depict the north gallery as extending from the north side of the river, paralleling Fleur Drive to manhole MH-1. Does the south gallery begin at the manhole? If so, the 1,000 ft. distance from P-4 is not correct. Please review and revise as appropriate.</p>

EPA Review Comments  
Performance Evaluation Report 28  
DICO, Des Moines, Iowa  
June 2014

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9	Page 5, Section 5.0	The report states that samples from MH-1S were not collected during 2013. The report must provide the reasons for not collecting the samples from MH-1S during 2013. Please revise the report accordingly and re-submit for the EPA's approval.
10	Figure 11	Insert groundwater elevations on portions of contours so they can be easily read (e.g. – 779 & 780 between wells NW-2 & NW-29 should be relocated).
11	Appendix A, Monthly Progress Reports	Indicate what the asterisk means next to select well IDs in each of the Water Level Data Field Check Lists.

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<p>■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</p> <p>■ Print your name and address on the reverse so that we can return the card to you.</p> <p>■ Attach this card to the back of the mailpiece, or on the front if space permits.</p>	<p>A. Signature <span style="float: right;"><input type="checkbox"/> Agent <input type="checkbox"/> Addressee</span></p> <p><i>*Cheri T. Holley</i></p> <p>B. Received by (Printed Name) <span style="float: right;">C. Date of Delivery</span></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>1. Article Addressed to:</p> <p style="text-align: center; margin-top: 20px;">Ms. Cheri T. Holley DICO 2345 East Market Street Des Moines IA 50317</p>	<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <span style="margin-left: 20px;"><input type="checkbox"/> Express Mail</span></p> <p><input type="checkbox"/> Registered <span style="margin-left: 20px;"><input checked="" type="checkbox"/> Return Receipt for Merchandise</span></p> <p><input type="checkbox"/> Insured Mail <span style="margin-left: 20px;"><input type="checkbox"/> C.O.D.</span></p> <p>4. Restricted Delivery? (Extra Fee) <span style="float: right;"><input type="checkbox"/> Yes</span></p>
<p>2. Article Number (Transfer from service label) <span style="float: right; font-family: monospace;">7002 0860 0006 5965 9650</span></p>	
<p>PS Form 3811, February 2004 <span style="margin-left: 100px;">Domestic Return Receipt</span> <span style="float: right;">102595-02-M-1540</span></p>	

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Ms. Cheri T. Holley  
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2345 East Market Street  
Des Moines IA 50317

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